

Applicant: Kari Raisanen et al.
App. No.: 10/597,915
Response to Office action dated Jan. 23, 2009
Response filed March 24, 2009

Remarks

Claims 33–65 remain pending in the application. In the Office action dated Jan. 23, 2009, claims 33–65 were rejected as obvious over Nordstrom, or Mansson et al., or Oka et al., or Roell, in view of Egelhof et al., or Turner et al., or Kotitschke, or Bubik et al. Claims 33–65 were provisionally rejected as nonstatutory obviousness-type double patenting as being unpatentable over claims 31–62 of copending App. No. 10/597,940 in view of US Pat. No. 6,342,125.

With respect to the obviousness type double patenting rejection applicant will file a terminal disclaimer in accordance with MPEP 804(B)(1) when one of the two applications has been allowed to issue.

The claims of the present application have not been rejected over 7,364,643 but if necessary applicant makes the following statement of co-ownership:

Application 10/597,915 and patent 7,364,643 were at the time the invention of application 10/597,915 was made, owned by Metso Paper, Inc., of Helsinki.

The claims have been amended to emphasize that the leading edges of the dewatering shoes do not dewater the forming webs, i.e., does not cause pulsating dewatering. This amendment is supported by ¶¶ [0046], [0049], and [0054] of the specification.

The claims have also been amended to correct indefinite language with respect to –formation wires– which language has been replaced by reference to the specific wires. Other corrections include the addition in claim 33 of second before the “pulp layer”. In claim 65 reference to a first twin-wire stretch has been defined and rendered definite, and clarity has been improved by deleting “in” and “is” as shown. In claim 55 “supplies” has been replaced by –supply–.

The examiner agrees that the primary references **Nordstrom, Mansson et al., Oka et al., and Roell** “*fail to teach the use of a non-pulsating dewatering zone, formed by a curved shoe, followed by a pulsating dewatering zone as claimed.*”

The teachings of Egelhof et al., or Turner et al., or Kotitschke, or Bubik et al.

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Egelhof et al. describe the shoe 16 with respect to FIG. 1 (col. 4, lines 11–12) as “formed of several strips 16' with drainage slits present between them.” Thus indicating that the shoe does not perform nonpulsating dewatering. The forming shoes 16 depicted in FIGS. 4 and 5, clearly have the same structure as the shoes 16 depicted in FIG. 1. The figures show the shoes 16 in cross-section and the description indicates that structures 16' have cross machine direction spaces in the cross machine direction which cause pulsating dewatering, not the claimed “non-pulsating dewatering in the first dewatering zone by drawing water from the first partial web with the second pulp layer through openings in the cap formed by holes or by gaps essentially in the lengthwise direction of the machine” (claim 33).

Turner et al. describes the “surfaces of forming shoe 22 [i]n a preferred embodiment...” as “defined by a plurality of closely spaced, parallel foils which extend in the cross-machine direction.” (col. 3, line 66 to col. 4, line 4.) The only other configuration of a shoe surface mentioned is with respect to 26 which is preferably blank or impervious (Col. 3, lines 50–53). Therefore, Turner et al. provides no suggestion for applicant’s claimed structure of openings formed by “holes or by gaps extending essentially in the lengthwise direction of the machine” (claim 49) or the non-pulsating dewatering of the method claims 33, 64.

In **Kotitschke** the shoes 6 of FIGS. 1, 2, 5, and 6 are positioned after the beginning of the dewatering zone, its dewatering effect is not described, but, because of its location, it cannot conform to the claim language of the claims, for example, claim 33 “which shoe is *located at the forward end* of the two-wire stretch, ... dewatering of the first partial web with second pulp layer with an under-pressure through the openings of the cap in an area *following after the leading edge of the first fixed formation shoe*”. Further, there is no indication that the shoes 6 of Kotitschke meet the limitations of the claimed shoe with respect to having openings formed by holes or by gaps essentially in the lengthwise direction of the machine which extend through the cap or perform a non-pulsating dewatering function. The shoes 6 of FIGS. 3, 4, and 7 are opposed by rigid slats 7.4, causing pulsating dewatering.

Bubik et al. in FIGS. 1–4 the first forming shoe 28' is backed by blades, foils, or foil

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ledges 30' which cause pulsating dewatering. With respect to FIGS. 5–7 in which the forming shoes 28' are not backed by blades, foils or foil ledges, there is nevertheless no indication that the shoes effects nonpulsating dewatering. The shoes is labeled with the same reference number 28' and show a machine direction profile of cross machine direction gaps. The shoes 28' must have cross machine gaps to correspond with the foil blades or foil ledges 30' and the only conclusion is that they have this feature in FIGS. 5–7, contrary to applicant's claimed *"cap formed by holes or by gaps essentially in the lengthwise direction of the machine which extend through the cap"* (claim 33). Further, the leading edges of the shoes 28' are arranged to remove water from fiber pulp traveling in between the formation wires.

In Poikolainen US 7,364,643 arrangements including a nonpulsating dewatering shoe followed by a pulsating dewatering arrangement are disclosed. In the invention set forth in the present claims the combination of nonpulsating dewatering followed by pulsating dewatering is claimed with respect to forming a multi-ply web. The examiner has failed to identify a non-pulsating dewatering shoe followed by the claimed pulsating dewatering, in a multi-ply web former, or to provide a rational argument for why a person of ordinary skill in the art would combine the claimed elements.

Applicant believes that no new matter has been added by this amendment.

Applicant submits that the claims, as amended, are in condition for allowance.
Favorable action thereon is respectfully solicited.

Respectfully submitted,



Patrick J. G. Stiennon, Reg. No. 34934
Attorney for Applicant
Stiennon & Stiennon
P.O. Box 1667
Madison, Wisconsin 53701-1667
(608) 250-4870
Amdt2.res

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